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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF : Keller et al.
FOR : GOLF BALL WHICH INCLUDES FAST-
CHEMICAL-REACTION-PRODUCED
COMPONENT AND METHOD OF
MAKING SAME
SERIAL NO. : 09/040,798
FILED : March 18, 1998
EXAMINER : Steven Wong
ART UNIT : 3711
ATTORNEY DOCKET NO. : P-5550
(SLD 2 0207)

Cleveland, Ohio 44114-2518
March 22, 2001

I hereby certify that this correspondence is being deposited
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Mary Ann Lemmon-DeLoach
(SIGNATURE)

APPELLANT'S REPLY BRIEF

Assistant Commissioner of Patents
Washington, D.C. 20231

Dear Sir:

This brief is in reply to the Examiner's Answer mailed February 9,
2001. This reply is necessary to address several arguments advanced by the
Examiner in that Answer in the above-captioned appeal.

As will be recalled, at issue is the rejection of claims 1-44 under
35 U.S.C. § 103(a) for allegedly being unpatentable over U.S. Patent No.
5,779,562 to Melvin et al. or U.S. Patent No. 5,813,322 to Cavallaro et al., each
in view of U.S. Patent No. 4,762,322 to Molitor et al.

Specifically, in his Answer, the Examiner asserted:

The latter reference [the '322 patent to Molitor] renders it
obvious to mold the polyurethane layers of the primary
reference [either the '562 patent to Melvin et al. or the '322
patent to Cavallaro] golf balls by a reaction injection molding
process, since such is an obvious expedient for providing the
desired resiliency in a golf ball, as illustrated by the secondary
reference [the '322 patent to Molitor]. Any other possible

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distinctions over said thus modified golf balls are deemed conventional molding techniques that would necessarily be used in such molding process.

Page 3 of February 9, 2001 Answer (bracketed text added).

The Examiner admits that the golf ball patents to Melvin et al. and Cavallaro et al. fail to teach a significant aspect of the claimed subject matter:

Melvin et al. and Cavallaro et al. teach golf ball constructions having polyurethane outer covers, however, they lack the teaching for forming the covers by a reaction injection molding process.

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The Examiner attempts to support the present rejection by combining the teachings of a patent directed to club heads with patents directed to golf balls. The Examiner argues that "it would have been obvious" to make this combination:

In this case, all references are directed to sports articles which utilize polyurethane outer covers. The sports articles are subjected to severe impacting wherein a high strength to weight ratio would be a desirable quality for both articles. It would have been obvious to one of ordinary skill in the art to utilize reaction injection molding instead of injection molding to form the outer polyurethane layer of either Cavallaro et al. or Melvin et al. in order to provide a golf ball with a cover having a high strength to weight ratio.

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It has long been settled that "obvious to try" is not the proper standard under § 103. *Uniroyal, Inc. v. Rudkin-Wiley Corp*, 837 F.2d 1044, 5 USPQ2d 1434 (Fed. Cir. 1988), cert. denied, 488 U.S. 825 (1988), *on remand*, 13 USPQ2d 1192 (D. Conn. 1989); *In re Geiger*, 815 F.2d 686, 688, 2 USPQ2d 1276, 1278 (Fed. Cir. 1987)(the PTO failed to establish a prima facie case of obviousness as to the appellant's claim to a method of inhibiting scale formation on and corrosion of metallic parts in cooling water systems by use of compositions containing a certain copolymer, a water soluble zinc compound and a certain acid; "[a]t best, in view of [the disclosures of the prior art], one skilled in the art might find it obvious to try various combinations of these known scale and corrosion prevention agents."); *N.V. Akzo v. E.I. du Pont de Nemours & Co.*, 810 F.2d 1148, 1151, 1 USPQ2d 1704, 1707 (Fed. Cir. 1987) ("Of course, an 'obvious to try' standard is not a legitimate test of patentability");

Orthokinetics, Inc. v. Safety Travel Chairs, Inc., 806 F.2d 1565, 1575, 1 USPQ2d 1081, 1087 (Fed. Cir. 1986) ("[T]he district court's analysis employed an inappropriate 'would have been able to produce' test. The statute, § 103, requires much more, i.e., that it would have been obvious to produce the claimed invention at the time it was made without the benefit of hindsight."); *Medtronic, Inc. v. Cardiac Pacemakers, Inc.*, 721 F.2d 1563, 220 USPQ 97 (Fed. Cir. 1983) ("The test under § 103 is not what 'one might contemplate.'"). See also *In re Eli Lilly & Co.*, 902 F.2d 943, 945, 14 USPQ2d 1741, 1743 (Fed. Cir. 1990) ("An 'obvious-to-try' situation exists when a general disclosure may pique the scientist's curiosity, such that further investigation might be done as a result of the disclosure, but the disclosure itself does not contain a sufficient teaching of how to obtain the desired result, or that the claimed result would be obtained if certain directions were pursued.").

The foregoing noted decisions make it clear that all which exists here is a mere mention of using RIM as a method for producing club heads. There is absolutely no teaching from the cited references of using a RIM technique for manufacturing a golf ball.

Furthermore, there are significant differences between manufacturing a relatively large club head and a thin cover layer on a golf ball. Molding a cover layer on a golf ball requires extremely sensitive manufacturing controls since measures must be taken to ensure that the composition, properties, and especially the thickness of the cover layer are uniform and consistent across all regions of the ball. For example, thicknesses for cover layers of the claimed golf balls may be as small as 0.02 inches (see page 9, line 22 of the application). In contrast, the concerns in manufacturing the club head described by Molitor et al. involve "high strength" and "low density" (see col. 2, line 29).

According to the Examiner, the "link" between the golf club patent (Molitor et al.) and the golf ball patents (Melvin et al. and Cavallaro et al.) is that the golf ball patents note the use of injection molding while the club head patent notes the use of *reaction* injection molding. Specifically, the Examiner contended:

The passages of Cavallaro et al. and Melvin et al. state that the outer layer may be injection or compression molded. The passage of Molitor et al. states that the use of RIM polyurethane at the club face provides better resiliency matching with the ball. Thus, it would have been obvious to one of ordinary skill in the art to utilize reaction injection molding instead of injection molding to form the outer polyurethane layer of either Cavallaro et al. or Melvin et al. in order to better match the resiliency of the golf ball cover with a club face having a reaction injection molded polyurethane face.

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The only reason provided by the Examiner as to why "it would have been obvious" to use RIM instead of an injection molding technique is that use of RIM would "better match the resiliency of the golf ball cover with a club face having a reaction injection molded polyurethane face." What does resiliency have to do with the subject matter of the pending claims? And, upon what grounds does the Examiner base this assertion? The Examiner did not cite any teaching in the art that supports a theory that forming an outer polyurethane cover layer of a golf ball via a RIM process results in a "better match" between "the resiliency of the golf ball cover with a club face having a reaction injection molded polyurethane face."

In fact, the Examiner is mischaracterizing the limited teachings of the '322 patent to Molitor et al. In the passage to which the Examiner cites, i.e. col. 3, lines 12-32, Molitor et al. teach that the use of RIM polyurethane at the club face leads to better resiliency matching between a RIM formed club head and a conventional ball (presumably having cover layers that are formed by injection or compression molding). Molitor et al. do not teach that improved resiliency matching occurs between club head and ball when a RIM formed club head is used in conjunction with a RIM formed ball. Nor does Molitor et al. teach that improved resiliency matching occurs between a non-RIM formed club head and a RIM formed ball.

Furthermore, what is "better resiliency matching"? Molitor et al. fails to explain what this is. The Examiner fails to explain what this is.

There is no mention of "resiliency matching" in the present application. Nor is that an advantage or benefit of the claimed invention. Furthermore, it is unknown whether "better resiliency matching" would be

desirable for the present invention golf balls. Although Appellants are unsure of the precise meaning of that term, the Board is respectfully asked to keep in mind that in some instances it is desirable to utilize a golf ball with cover properties such as hardness that are either very different from, or very similar to, the club head face in order to promote spin or minimize spin of the ball after impact. Simply put, there is no indication in any of the references or the present application as to (i) what "resiliency matching" is, (ii) whether achieving such would be desirable, and (iii) how to achieve such in producing the present invention golf balls.

Additionally, the Examiner ignores the numerous and important claim recitations in the pending dependent claims. The Examiner has never explained how the three (3) patents relied upon support a rejection of, for instance, claim 36. Claim 36 calls for a golf ball according to claim 14 wherein the polyurethane/polyurea material incorporates meta-tetramethylxylylene diisocyanate. Where is the requisite teaching in the cited references to use this specific type of diisocyanate? There is no teaching.

Moreover, none of the cited references provide any teaching of using a reaction product that is recycled by glycolysis (dependent claims 13 and 17), or an aspect in which at least 5% of the polyurethane/polyurea is formed from recycling a polyurethane, polyurea, polyester, and/or polyethylene glycol (dependent claims 16 and 44), or recycling at least 20% of the polyurethane/polyurea or RIM-produced material (dependent claims 39 and 41). Simply put, there is no teaching.

The present rejection is a classic example of impermissible hindsight reconstruction. It is only with the aid of the current specification and claims that the combination of references was arrived at. And even if the present combination of references is used, those references do not contain sufficient teaching to properly reject any of the claims at issue, particularly the noted dependent claims. In summary, none of the cited references provide any suggestion or incentive for the claimed golf balls or related processes.

For at least these reasons, the rejection of claims 1-44 is misplaced and must be withdrawn.



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Respectfully submitted,

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